

Water-Data Report 2008

08111500 Brazos River near Hempstead, TX

Lower Brazos Basin
Lower Brazos-Little Brazos Subbasin

LOCATION.--Lat 30°07'44", long 96°11'15" referenced to North American Datum of 1927, Washington County, TX, Hydrologic Unit 12070101, at downstream side of bridge on U.S. Highway 290, 1.1 mi upstream from Texas and New Orleans Railroad Co. bridge, 6.5 mi northwest of Hempstead, 10.5 mi upstream from Caney Creek, and at mile 193.8.

DRAINAGE AREA.--43,880 mi² of which 9,566 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Oct. 1938 to current year. Gage-height records collected in this vicinity at intermittent periods since 1903 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1512: 1941. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 107.90 ft above NGVD of 1929. Prior to Nov. 1, 1940, nonrecording gage at railroad bridge 6,000 ft downstream at datum 4.20 ft higher than current datum. Nov. 1, 1940, to Sept. 30, 1963, nonrecording gage at site 1,500 ft downstream at datum 10.00 ft higher than current datum. Oct. 1, 1964, to July 31, 1974, water-stage recorder 1,500 ft downstream at datum 10.00 ft higher than current datum. Aug. 1, 1974, to Dec. 31, 1988, water-stage recorder at present site at datum 10.00 ft higher than current datum. Satellite telemeter at station.

REMARKS.--Records fair. Since installation of gage, at least 10% of contributing drainage area has been regulated. There are many diversions above station for irrigation, municipal and industrial uses, and oil field operations. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1899, 66.1 ft Dec. 8, 1913, at site 1,500 ft downstream at present datum, from information by Texas and New Orleans Railroad Co., obtained at bridge 6,000 ft downstream. Flood of July 4, 1899, reached a stage of 63.6 ft, at site 1,500 ft downstream at present datum, from information by Texas and New Orleans Railroad Co.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	8,760	2,110	2,270	1,340	2,320	1,400	3,420	10,300	3,790	1,340	542	1,730
2	7,100	1,960	1,970	1,280	2,560	1,230	3,250	9,690	3,920	1,180	518	1,650
3	6,240	1,900	1,890	1,250	2,270	1,170	2,620	9,070	3,290	1,440	491	1,430
4	5,900	2,080	2,080	1,230	2,190	1,350	2,510	8,440	2,570	1,300	482	1,100
5	5,800	2,000	1,800	1,220	2,050	1,580	3,050	10,900	2,560	1,270	845	927
6	7,460	1,740	1,630	1,210	1,900	1,630	3,520	17,300	2,530	1,250	1,430	819
7	9,430	1,590	1,700	1,170	1,740	2,080	3,530	11,200	1,950	1,010	1,490	832
8	10,400	1,470	1,810	1,180	1,460	2,940	4,270	12,700	1,780	943	1,610	1,020
9	10,400	1,400	1,620	1,240	1,260	2,720	4,720	10,300	2,210	915	1,430	963
10	9,740	1,370	1,630	1,280	1,360	2,890	4,370	7,030	2,470	845	1,160	1,060
11	9,780	1,340	1,690	1,220	1,380	6,390	3,870	5,160	2,390	796	912	1,270
12	10,100	1,310	1,580	1,170	1,270	9,030	3,310	4,690	2,270	798	935	1,150
13	9,960	1,340	1,540	1,120	1,340	9,900	3,030	4,610	2,190	742	1,150	1,510
14	9,630	1,510	1,800	1,100	1,380	9,510	4,170	4,160	2,020	694	1,200	2,830
15	9,320	1,570	2,210	1,090	1,350	7,560	4,340	5,640	1,550	695	1,040	2,380
16	9,550	1,440	5,100	1,180	1,880	5,910	3,390	14,500	1,270	703	1,130	1,970
17	10,000	1,360	5,140	1,220	9,290	4,920	3,000	26,600	1,220	672	1,270	1,750
18	11,600	1,560	3,960	1,130	10,900	4,320	3,190	25,600	1,470	687	1,070	1,700
19	11,100	3,300	3,850	1,270	8,060	4,320	3,360	15,800	1,360	702	1,130	1,470
20	9,690	4,590	3,990	1,500	6,980	4,970	3,270	10,300	1,170	1,320	1,280	1,220
21	8,510	3,080	3,760	1,370	6,660	5,910	3,290	8,020	1,210	1,230	8,040	999
22	8,210	2,300	3,050	1,250	5,970	9,680	3,550	8,440	1,060	922	9,380	820
23	8,050	2,070	2,600	1,320	4,900	8,730	2,810	8,870	1,230	766	6,130	708
24	7,650	2,000	2,250	1,360	3,810	7,120	2,290	8,550	1,360	727	4,370	629
25	7,290	1,860	1,980	1,700	3,020	6,080	1,990	8,060	1,210	688	3,320	589
26	6,980	2,250	1,620	1,880	2,490	5,700	2,430	7,480	1,450	650	2,700	557
27	6,080	2,810	1,480	2,090	2,160	5,610	2,730	6,040	1,590	843	2,260	542
28	5,640	2,770	1,560	1,930	1,950	5,240	3,800	5,400	1,520	809	1,980	517
29	4,840	3,080	1,630	1,670	1,680	4,350	7,510	4,830	1,280	684	1,810	493
30	3,390	2,780	1,530	1,520	---	3,820	10,100	4,500	1,260	618	1,730	480
31	2,450	---	1,380	1,490	---	3,360	---	4,040	---	569	1,750	---
Total	251,050	61,940	72,100	41,980	95,580	151,420	110,690	298,220	57,150	27,808	64,585	35,115
Mean	8,098	2,065	2,326	1,354	3,296	4,885	3,690	9,620	1,905	897	2,083	1,170
Max	11,600	4,590	5,140	2,090	10,900	9,900	10,100	26,600	3,920	1,440	9,380	2,830
Min	2,450	1,310	1,380	1,090	1,260	1,170	1,990	4,040	1,060	569	482	480
Ac-ft	498,000	122,900	143,000	83,270	189,600	300,300	219,600	591,500	113,400	55,160	128,100	69,650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	4,621	5,202	6,561	7,159	8,206	8,556	8,577	13,460	10,710	5,472	2,716	3,049
Max	24,830	29,490	41,590	55,990	54,750	50,450	42,860	69,860	51,960	58,130	20,920	18,030
(WY)	(1960)	(1975)	(1941)	(1992)	(1992)	(1992)	(1945)	(1957)	(1957)	(2007)	(2007)	(1974)
Min	181	318	299	386	484	426	922	954	1,027	817	617	454
(WY)	(1953)	(1989)	(1955)	(1940)	(2000)	(1954)	(1954)	(1996)	(1956)	(2000)	(2006)	(1954)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1939 - 2008	
Annual total	7,084,947		1,267,638			
Annual mean	19,410		3,463		7,017	
Highest annual mean					26,170	1992
Lowest annual mean					1,175	2000
Highest daily mean	79,200	Jul 18	26,600	May 17	138,000	May 1, 1957
Lowest daily mean	940	Mar 11	480	Sep 30	137	Nov 6, 1952
Annual seven-day minimum	1,030	Mar 6	544	Sep 24	140	Nov 3, 1952
Maximum peak flow			28,600	May 17	143,000	May 2, 1957
Maximum peak stage			29.79	May 17	^a 54.21	May 2, 1957
Annual runoff (ac-ft)	14,050,000		2,514,000		5,083,000	
10 percent exceeds	51,000		8,790		18,300	
50 percent exceeds	13,500		1,980		2,560	
90 percent exceeds	1,600		914		694	

^a At present datum.

